Brief Communications

The *Journal Citation Reports* As a Deselection Tool

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INCREASINGLY, it has become necessary for librarians to justify the cancellation of nonessential journal subscriptions. In the past, subscriptions were often renewed automatically upon receipt of the annual invoices. Several factors, however, have challenged this passive ritual. First, budgetary restraints have caused many librarians to review new journal acquisitions carefully. Combined with inflation and service charges, this creates a major obstacle to the wholesale renewal process. Second, all libraries are restricted to a fixed physical area. Space limitations certainly prevent collection development and serials librarians from overzealously adding titles to their collections.

Other considerations that must be factored in are faculty and staff needs and requests. In any medical school or academic institution, departmental staff fluctuates and users' interests change over the years. Newer journal titles may satisfy current professional needs better than older ones, and some titles may not be read as widely as they were in previous years. Moreover, as editors change, so may the focus and intellectual level of a particular journal. For all of these reasons, blanket renewal of annual subscriptions must be examined.

The first step in overturning the "passive ritual" is to identify journals that are valid candidates for cancellation or weeding. Obviously, the core titles of any specialty will not be affected, but peripheral titles should be examined for possible cancellation.

Before proceeding, the serialist should ask several questions: What are the characteristics of peripheral journals? How is use or nonuse identified? What criteria can justify elimination of a title perceived as marginal? There is no regular mechanism for reviewing older, currently published titles on highly specialized subjects for serials, as there is for monographs.

The identification of questionable journals in a collection is a formidable task, but the survey approach reported in the literature has been highly successful [1]. This method involves placing slips on such journals stating that the library may stop subscribing to them. Library users can then comment on the proposed decision. Another method for evaluating use is a simple visual review: Is the spine cracked? Is there an accumulation of dust? This method yields dubious results at best, but it can confirm suspicions of nonuse. Circulation statistics for bound volumes and unbound issues can also provide an objective appraisal, if they are available. The *Journal Citation Reports (JCR)* of the *Science Citation Index* also offers a good assessment of a journal's standing in the academic community [2, 3]. This paper explores the use of the *JCR* in making final deselection decisions.

More than a decade has passed since the *JCR* became a regular feature of the *Science Citation Index*. Since its appearance, numerous papers have appeared on its value as a bibliometric tool. Many of them deal with the *JCR*'s use in creating lists in specific subject areas [4, 5]. Just as the *JCR* can be used to develop a journal hierarchy, it can also be used in conjunction with other methods as a deselection tool.

The *JCR* is most effective when it is employed after the questionnaire and visual methods have been used to prepare a list of prospective journals for deselection. Librarians using the *JCR* must be careful not to compare journals in nonrelated subject areas. Differences among disciplines in citation practices, research progress, and other factors can undoubtedly affect the outcome of the comparison. But the *JCR* can be quite helpful in comparing two journals in the same subject area. This is true especially when journals are compared over a span of years to detect an increase or decline in citations.

The *JCR* is a two-volume work published annually; it appears shortly after the cumulated *Science Citation Index* is released. The introductory chapters contain descriptions and sample dis-

plays to explain all of its components. The introduction is followed by five sections. The first, the Journal Ranking Package, has eight subsections, only two of which are relevant to this discussion. Next are the Source Data Listing and Journal Half-Life Packages (the latter having three subsections), neither of which are discussed here. However, the Journal Half-Life Package can be helpful in another activity of the deselection process—namely, designating journals for removal to compact storage. The last two of the five sections, the Citing Journal Package and the Cited Journal Package, are important in deselection.

Journal Ranking Package

The Journal Ranking Package, an eight-section part of the *JCR*, contains two sections of particular interest. Section one is an alphabetical list of journals covered in the *Science Citation Index*. To begin the evaluation, the librarian simply locates the titles in question and notes their impact factors. The impact factor, a ratio between citations and citable items published, is one of the most useful gauges for deselection. It measures the number of times that source items (review articles, original research, and technical notes) in a given journal are cited. As the impact factor takes into account such critical variables as publication age and frequency, the result is a reasonably objective tool [6]. Section eight of the Journal Ranking Package lists titles in subject categories by impact factor. In this section, the librarian can find a journal's subject area, easily discernible by title, and its ranking within that area. Its standing, based on the impact factor, places the journal into the overall picture of journals in the same field. If it is not in the top 60% to 80%, a decision to discontinue it is probably sound.

Citing Journal Package

A close look at the other journals a particular journal has cited can be revealing. This information is available in the Citing Journal Package. Listed under each title are the journals that it has cited back to 1974, and the total number cited. If the journal in question uses few citations, the serialist might want to investigate: Are the journals it cites within the same subject area very specialized? The impact factors of the cited journals are useful as well. A movement away from journals with higher impact factors might mean the citations are coming from one of two sources: lesser known titles in the field or more specialized journals. If the former applies, the label of "fringe" or "peripheral" is reinforced, and deselection is recommended.

Cited Journal Package

Another indicator of the importance of a journal is how often it is cited by other journals. The Cited Journal Package is arranged in alphabetical, abbreviated-title order. Under each title is a list of source journals that have cited it. The first line contains the total number of citations for a given year. A steadily decreasing number of citations from core or standard journals might signify that the journal is slipping in significance. It is important to note whether citations are dropping and whether this is a consistent trend over a span of years. With other indicators, a decrease in citations may be justification for purging a title from the collection.

Preliminary Results

A preliminary test was made to determine whether the *JCR* provided adequate data to support the renewal or cancellation of a small sample of titles. Seven titles from the Himmelfarb Library were nominated for deselection by usage analysis and by observation (dust on bound volumes and cracked spines on loose issues). Two of these titles, *Medical Services Digest* and *Medical Aspects of Human Sexuality*, were not listed in the *Science Citation Index* or in *Index Medicus*. This confirmed our doubts about these titles, so they were recommended for deselection. Of the remaining five titles, only one *(Biochemie)* had a strong impact factor; it was withdrawn from the proposed deselection list. Two others showed mixed results in the citing and cited journal records. However, other indicators were strong enough to warrant dropping these titles from the collection along with two other titles with weak impact factors. Therefore, the *Danish Medical Bulletin, Japanese Journal of Experimental Medicine, Microbios,* and *Pharmatheraputica* were put on the final list for deselection. A user survey could have provided additional criteria to confirm these deselection decisions.

Conclusion

In summary, three components of the *JCR* have been applied to weeding a journal collection. The *JCR* was used with other criteria to support deselection decisions. As Yanovsky has observed, acquisitions and serials management problems will be with us for years to come, as journals remain the principal channel for scientific communication [7]. Even with the emergence of electronic journals, hard copy will continue to be used [8]. In this changing milieu, the *JCR* is a helpful objective tool to augment other methods of journal deselection.

References

1. Grefsheim S, Bader S, Meredith P. User involvement in journal deselection. Collect Manage 1983 Spring/Summer;5:43–52.
2. Broadus R. A proposed method for eliminating titles from periodical subscription lists. Coll Res Libr 1985 Jan;46:30–5.
3. Line MB. Use of citation data for periodicals control in libraries: a response to Broadus. Coll Res Libr 1985 Jan;46:36–7.
4. Usdin BT. Core lists of medical journals: a comparison. Bull Med Libr Assoc 1979 Apr;67:212–7.
5. Hirst G. Discipline impact factors: a method for determining core journal lists. J Am Soc Inf Sci 1978 July;29:171–2.
6. Institute for Scientific Information. SCI J Cit Rep 1983;15:12a.
7. Yanovsky VI. Citation analysis significance of scientific journals. Scientometrics 1981 May;3:223–4.
8. Bennion B, Karschamroon S. Multivariate regression models for estimating journal usefulness in physics. Documentation 1984 Sep;40:217.

Received January 1985; accepted March 1985.

Development of SCHIN: The South Carolina Health Information Network*

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In July 1984, the libraries at the Medical University of South Carolina (MUSC) and the University of South Carolina School of Medicine (USC) were awarded an NLM grant to develop a statewide, computer-based integrated library management system. This system, the South Carolina Health Information Network (SCHIN), will offer health professionals throughout the state access to the information resources and services available at all kinds of South Carolina health institutions.

The cooperative framework for SCHIN exists in the AHEC system established during the 1970s and the agreements for medical library service offerings outlined by the two medical school libraries in 1978. Designed especially to meet the informational needs of South Carolina's rural health care practitioners, the AHEC plan seeks to serve this group while supporting and supplementing wherever possible the resources of the local health care libraries already serving the urban practitioner [1]. Services offered within the existing biomedical network in South Carolina include reference, bibliographic searches on online databases, document delivery, consultations, and grant application advice and information.

Objectives

The objectives of SCHIN are (1) to develop a model statewide integrated library and information delivery system, (2) to provide the opportunity for basic libraries to participate in a symbiotic cooperative library network, and (3) to bring individual health practitioners into direct contact with information through automated library systems.

SCHIN will enhance existing AHEC library services by automating them and will add new capabilities to medical information resources in South Carolina. For the first time, the end user will have direct access to the medical literature available throughout the state. The user will browse a union catalog, determine library holdings, and request material in a single operation, without leaving home or office. The user will participate directly in online database searching with a trained searcher at either of the medical schools and communicate with colleagues via electronic mail. The speed, sophistication, and effectiveness of medical information transfer will be obviously and measurably enhanced as SCHIN develops. Linkage to regional medical networks, other state networks, and possibly even national networks will be eventual realities as technology continues to develop.

The technological basis for SCHIN is the simultaneous mounting at the state's two medical schools of computer-based integrated library systems that possess not only the usual features of circulation, cataloging, acquisitions, serials control, and an online catalog, but the additional requirement of a networking component. The interlibrary loan and electronic mail capabilities are essential to SCHIN, as it is this communication and sharing of information that will determine the network's success and usefulness.

System Selection

Six integrated systems were studied during 1983 to determine the best choice for SCHIN. Information on hardware requirements, software availability, modules in operation or development, extent of integration of subsystems, search capabilities for the online public catalog, authority control, and interface with OCLC were requested for each system. Since the ultimate goal of this project is a

*This project is supported by National Institutes of Health Grant No. 1 G08 LM04271-01 from the National Library of Medicine.